



Micro Commercial Components

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Features

- DC Current Gain - $h_{FE} = 40$ (Min) @ $I_C = 150\text{mA}$
- Complementary with BD135, BD137, BD139
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

Maximum Ratings

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	45 60 80	Vdc
Collector-Base Voltage	V_{CBO}	45 60 80	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current	I_C	1.5	Adc
Base Current	I_B	0.5	Adc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	1.25 10	Watt mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	12.5 100	Watt mW/ $^\circ\text{C}$
Operating & Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	10	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	100	$^\circ\text{C/W}$

Electrical Characteristics @ 25°C Unless Otherwise Specified

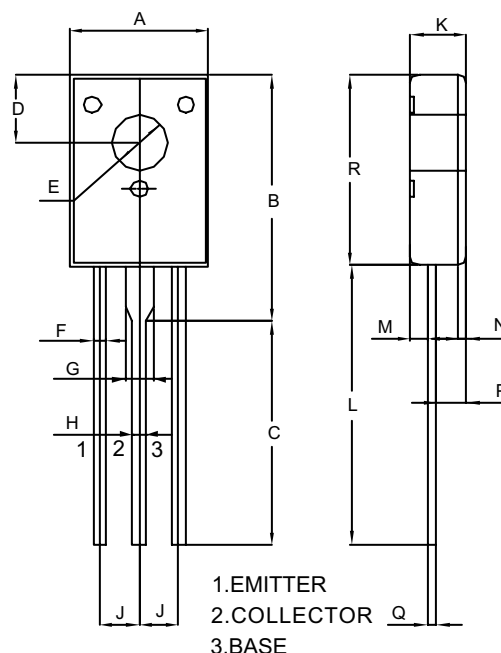
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
BV_{CEO}	Collector-Emitter Sustaining Voltage* ($I_C = 30\text{mA}$, $I_B = 0$)	45 60 80		Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB} = 30\text{Vdc}$, $I_E = 0$) ($V_{CB} = 30\text{Vdc}$, $I_E = 0$, $T_C = 125^\circ\text{C}$)		0.1 10	μAdc
I_{EBO}	Emitter Cutoff Current ($V_{BE} = 5.0\text{Vdc}$, $I_C = 0$)		10	μAdc
h_{FE}	DC Current Gain* ($I_C = 5\text{mA}$, $V_{CE} = 2\text{Vdc}$) ($I_C = 0.5\text{mA}$, $V_{CE} = 2\text{Vdc}$) ($I_C = 150\text{mA}$, $V_{CE} = 2\text{Vdc}$)	25 25 40	250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = 500\text{mA}$, $I_B = 50\text{mA}$)		0.5	Vdc
$V_{BE(on)}$	Base-Emitter ON Voltage ($V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$)		1	Vdc

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

BD136
BD138
BD140

Power Transistors
PNP Silicon
45,60,80 Volts

TO-18



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.291	0.307	7.400	7.800	
B		0.56		14.20	
C	0.50	0.53	12.76	13.36	
D	0.154	0.161	3.900	4.100	
E	0.12	0.13	3.10	3.30	
F	0.025	0.033	0.65	0.85	
G	0.046	0.054	1.170	1.370	
H	0.025	0.033	0.65	0.85	
J	0.08	0.10	2.08	2.48	
K	0.098	0.114	2.500	2.900	
L	0.602	0.618	15.30	15.70	
M		0.04		1.0	
N		0.02		0.5	
P	0.06	0.08	1.55	1.95	
Q	0.018	0.023	0.45	0.60	
R	0.43	0.44	10.80	11.20	

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BD136
BD138
BD140

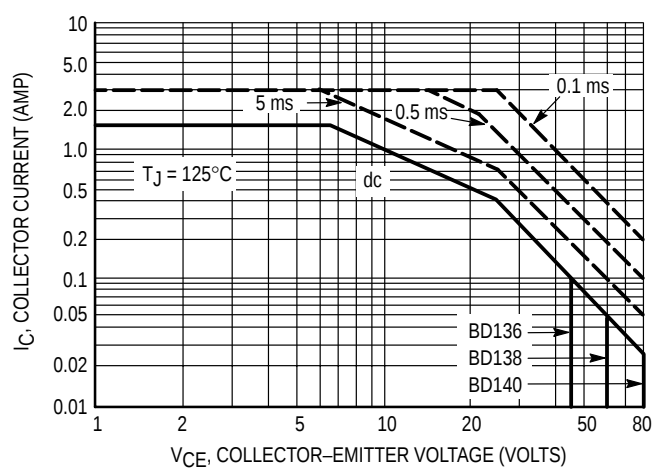


Figure 1. Active-Region Safe Operating Area

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